

# Climate change and sustainable development

A BLUEPRINT FROM THE SUSTAINABLE DEVELOPMENT NETWORK



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## Executive summary

Some claim that climate change will result in an increase in vector-borne disease, flooding, catastrophic weather events, loss of biodiversity, changes in agricultural production and other problems. Yet these are problems today and are either caused or are exacerbated by poverty. Tackling poverty is likely to be a better way of addressing these problems than attempting to control the climate.

Wealthy countries are generally resilient to such problems because they have adopted institutions that are more compatible with human nature, including:

- *property rights* that are well-defined, enforceable and transferable;
- the ability to make and form *contracts*, but also the freedom *from* contract;
- the *rule of law*, administered by an independent and fair judicial system;
- *open trade* free of vested interests and artificial barriers to trade; and
- *good governance* (which is enhanced by adherence to the other institutions) enabled by transparency, accountability amongst elected officials, bureaucrats and civil servants.

These institutions do not guarantee human happiness, but they are critical steps to achieve human well-being and environmental protection. They have been developed by human beings to enable us to cope better with uncertainty and are our best hope for addressing climate change and myriad other problems.

Unfortunately, most 'solutions' to climate change have focused on restricting emissions of greenhouse gases and supplying the governments of poor countries with

'aid'. Policies intended to mitigate climate change through restrictions on atmospheric carbon are almost certainly unsustainable; they are costly, would have little impact on the climate, and will most likely perpetuate poverty, making it more difficult for the poor to adapt to change. Meanwhile, foreign aid targeted at technological 'adaptation' is unlikely to do anything to prevent problems in the distant future and may even be counterproductive.

Whether climate change proves benign or harmful, attempting to control it through global regulation of emissions would be counterproductive. Sustainable development can only come through the adoption of institutions that enable people to engage in economic activities that create wealth and lead to technological progress.

## Introduction

*King Canute (995–1035), ruler of England, Denmark and Norway, was surrounded by sycophants. One day, he ordered his courtiers to take him to the sea shore, where he challenged them, saying, “Do you believe that I can halt the sea?” None disputed the fact, so Canute commanded the sea to cease its upwards march. But soon Canute’s feet were covered in water, showing that even he was unable to hold back the tide.<sup>1</sup>*

Canute’s experiment demonstrated that there are some natural forces beyond the control even of the wisest kings. Nevertheless, there are some sophisticated Kings who persist in the view that man can – indeed must – alter not only the tides but also the weather.

In the 1980s, fears were raised by some in the scientific community that human emissions of greenhouse gases were causing global warming, which if unchecked might adversely impact on humanity and the environment.<sup>2</sup> Policymakers, faced with the enormous task of evaluating the evidence, established an Intergovernmental Panel on Climate Change (IPCC), which reported for the first time in 1990.

Two years later, Ministers from around the world met in Rio de Janeiro, where they agreed a Framework Convention on Climate Change (FCCC), the objective of which is to ‘[stabilise] greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.’<sup>3</sup> At the third Conference of the Parties to the FCCC in 1997, Ministers met in Kyoto to agree a Protocol that would establish targets and timetables for restricting emissions of greenhouse gases (GHGs).

Proponents of Kyoto and similar proposals to limit emissions of GHGs justify their case by asserting that

<sup>1</sup> Legendary tale of King Canute (Knud den Store), see e.g. <http://www.fortidensjelling.dk/jellinge49.htm>.

<sup>2</sup> The relationship between emissions of carbon dioxide and global warming was first suggested in the 9th century and various investigators had addressed the issue, including Arrhenius and von Neumann. Concern about the possible dangers of CO<sub>2</sub> emissions and climate change were raised in the late 1960s, but it was not until the 1980s that the concern became sufficiently widespread to attract the attention of policymakers.

<sup>3</sup> UNFCCC Article 2.

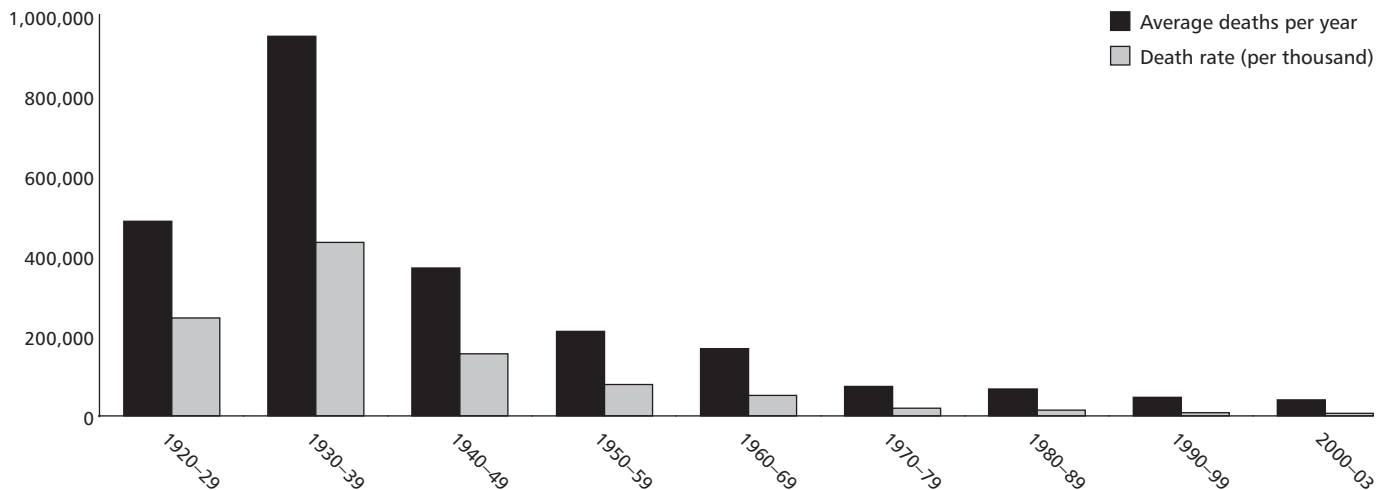
climate change indeed poses a grave threat, with a range of devastating consequences for humanity, and that restricting emissions now is the best response to that threat. The problem with this argument is that nearly all the alleged negative consequences of climate change (its ‘impacts’) are in fact problems that we face today. Future changes in climate may or may not make these problems worse, but the fact remains that unless they are addressed directly, they will continue to remain problems, regardless of attempts to limit human impacts on the climate.

Article 3 of the FCCC says that ‘policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost,’ and that ‘The Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing country Parties, thus enabling them better to address the problems of climate change.’ Meanwhile, ‘Measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.’

These seem like admirable qualifications and suggest that the question we should ask ourselves is not, ‘what should we be doing to limit human impacts on the climate?’ Rather, we should ask, ‘what actions can we take that will most cost-effectively reduce the problems we face today that may be exacerbated by climate change?’ Imposing restrictions on GHG emissions is only one of many possible policy options – and it may well not be the most cost-effective option.

## Climate

It is *climate* – that is to say the prevailing weather – not changes in the climate per se that is a major problem for most people on the planet. Heat and cold pose problems for human survival, both directly and indirectly. Direct effects include deaths from dehydration when it is hot, and deaths from hypothermia during cold spells. Indirect effects include impacts on agricultural productivity; both frosts and long periods of heat can cause crop damage. Likewise, droughts, floods and

Figure 1 Global deaths and death rates due to climate-related disasters, 1920–2003<sup>4</sup>

storms also have both direct and indirect impacts on humanity.

While the climate of a region – especially associated floods, droughts, storms, heatwaves and cold spells – affects everyone, it disproportionately affects the poor. This is because poor people are less able to adapt than are wealthy people. The wealthy are able to limit direct effects by constructing robust buildings, with efficient heating and cooling systems. They also have wider access to the better warning systems afforded by mass media and communications technologies, which enables them to escape adverse events.

Meanwhile, people who reside in wealthy countries can limit indirect effects by, among other things, using modern agricultural technologies, economic diversification (which means that climate-sensitive activities such as agriculture are a smaller proportion of economic output) and by purchasing insurance. In combination, these factors contributed heavily to a decline in deaths and death rates due to climate related disasters in 20th century (Figure 1). All indications suggest that similar reductions in deaths from natural disasters will continue as societies become more

technologically and economically sophisticated.

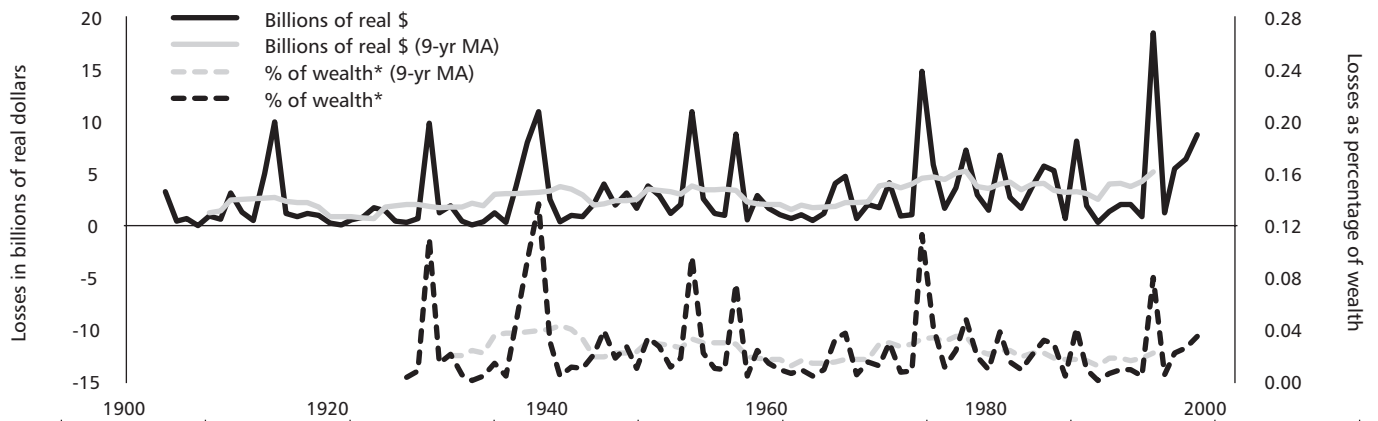
In spite of this dramatic reduction in climate-related fatalities, our perception of climate as a hazard appears to have increased. One reason is that worldwide incidences of severe weather events are more often reported in the news media now than they were ten or twenty years ago. For example, television viewers in the USA are three times more likely to see a story on severe weather today than they were only 30 years ago.<sup>5</sup> Moreover, because people today are wealthier now than then, they are more likely to own a television and have access to other forms of mass media.

Another reason that perceptions of the negative impact of climate may have increased is that adverse climate events can have large economic consequences for wealthier societies. The reason is that buildings, homes and infrastructure are more valuable in wealthy societies, so the losses are greater when catastrophe hits. Indeed, climate-related economic losses in the USA have risen over the course of the past 100 years. Although the absolute size of losses has risen, the relative size of these losses as a portion of wealth has remained constant, or even fallen.

<sup>4</sup> Goklany (2004) based on (1) 'EM-DAT: The OFDA/CRED International Disaster Database,' [www.em-dat.net](http://www.em-dat.net), Universite Catholique de Louvain (2) McEvedy & Jones, (3) FAOSTAT.

<sup>5</sup> Unger, S. (1999). Is strange weather in the air? A study of U.S. national network news coverage of extreme weather events. *Climatic Change* 41, pp.133–150

Figure 2 US property losses due to floods (1903–97)<sup>6</sup>



\*Wealth measured as fixed reproducible tangible assets.

This wealth effect is exacerbated by the fact that wealthier societies also have better developed insurance markets, which enable people to engage in riskier activities (at a price), such as building valuable homes in earthquake-prone areas, with less concern for the financial implications of being struck by disaster. Added to this are government-run insurance programmes, which effectively encourage people to engage in such risky behaviours.

## Health

Another alleged consequence of climate change is the spread of vector-borne and bacterial diseases. As with climate in general, these diseases are a problem today and they affect the poor far more than the wealthy.

Vector-borne diseases, such as malaria and dengue, are essentially diseases of poverty. Many countries that are today wealthy once experienced levels of vector-borne diseases similar to those now experienced by poor countries. In the fourteenth century, one-third of Europe's population died from the Black Death, which was spread by fleas that thrived on rats living in the

sewers of medieval towns. Wealthy countries have largely eliminated such diseases through a combination of environmental interventions (such as the use of pesticides), improved water and sanitation systems, and the development of vaccines and medicines.

Every year, between one and three million people die from malaria. A similar number die from dehydration as a result of diarrhoea. Around 2 million people die from respiratory infections. Most of these 6 million total deaths are children, all of them are poor, and most of their deaths are preventable.

Some of the factors that affect disease transmission include:

*Malnourishment:* Poor people tend to be less well-nourished than wealthy people. They often eat a diet based on staple foods, and lack essential vitamins and minerals. The effect is that their defense systems are weaker and less able to fight off disease.

Paradoxically some rich people also suffer from malnourishment, but this is a consequence of the voluntary consumption of inappropriate types and quantities of food, rather than lack of access to nutritious food. The dietary mishaps of the rich can be simply rectified by choosing to eat a better diet; this is not an option for the poor.

<sup>6</sup> Goklany, I. (2003) in *Adapt or Die*, Okonski, K. ed.

*Lack of information:* The poor tend to be less well-informed about the nature and causes of disease and so are more likely to engage in disease-causing behaviours, from not washing hands before eating to having unprotected sex.

*Lack of infrastructure and technology:* The lack of well-functioning road networks and restrictions on the import of trucks in poor countries make it difficult to distribute medicines, especially those that are adversely affected by high temperatures.

*Cultural constraints:* The poor typically remain hidebound by archaic social structures that oppress women. As a result, women in such societies often suffer from diseases that no longer affect women in rich societies.

*Exposure to disease-causing agents:* A combination of cramped living conditions, lack of clean water and sanitation, close proximity of animals, and inadequate sewerage conspire to make poor households breeding grounds for disease.

*Exposure to high levels of air pollution:* Indoor air pollution caused by the burning of dung, wood, crop residues and impure coal in poorly-flued fires (often indoors) is worse than almost any industrial pollution imaginable. Large particulate matter from indoor air pollution not only contributes heavily to the deaths of over one million children, it increases the risk of lung cancer and related diseases, leading to a shortened lifespan. Exposure to such pollution can also result in higher morbidity by creating conditions in the body for the onset of blindness, asthma and tuberculosis – especially for women who spend proportionately more time around such smoke.

## Environment

Some campaigners and scientists suggest that climate change will have a variety of incontrovertible environmental effects, including the loss of biodiversity and desertification. As with the climate effects discussed above, both biodiversity loss and land degradation are realities today but have little to do with climate change.

*Biodiversity loss:* the main reason for the loss of biological diversity globally is the conversion of habitat for human uses, especially agriculture. While climate change may

affect biodiversity (positively or negatively), improving the incentives of people to manage habitat sustainably is a far more urgent issue.<sup>7</sup>

*Desertification:* the concept of desertification is highly contentious. Nevertheless, land degradation is a real problem and, like biodiversity loss, is strongly related to the incentives people face when making decisions about resource use.<sup>8</sup>

## Flooding

Some allege that climate change will lead to rapidly rising sea levels, causing flooding in low-lying areas and displacing large numbers of people. Bangladesh is often cited as a country particularly at risk because a large proportion of its 130 million inhabitants live in a low-lying river delta which periodically experiences massive flooding and other severe weather events.

But is climate change the real threat to Bangladesh? Compare with Holland, a country of around 11 million inhabitants, most of which lies below sea-level, which has not experienced a flood since 1953. Purely on the basis of the threat of inundation from the sea, Holland should be more 'at risk' than Bangladesh. So why is Bangladesh so much more at risk of losing human life and experiencing economic losses from flooding than Holland?

The simple reason is that Holland has been a liberal democracy for over three centuries and has benefited from more-or-less continuous economic growth during that period. By contrast, prior to independence in 1971, Bangladesh was ruled by a series of more-or-less oppressive absentee landlords (the Moguls, the British, Pakistan). Since independence, it has been ruled by a series of more-or-less oppressive and incompetent elected officials. As a result, and in spite of (perhaps even in part because of) billions of dollars in aid, the majority of its inhabitants remain poor and disenfranchised, unable to control their immediate environment.

<sup>7</sup> See e.g. Southgate, D. (1998): *Tropical Forest Conservation in Latin America*, Oxford: Oxford University Press.

<sup>8</sup> See generally Morris, J. (1995) *The Political Economy of Land Degradation*, London: IEA.

## The economy

Some claim that changes in the climate will have negative economic consequences, caused by a combination of: changes in agricultural production, droughts and water scarcity, movement of pests, and other ecological factors. Such claims are, however, highly contentious for a variety of reasons.

Predictions of widespread negative economic effects are predicated on the assumption that the earth's climate will warm dramatically during the coming century. The IPCC upper estimate for warming by 2100 is 5.6°C. To arrive at this upper estimate, the IPCC had to assume that emissions of GHGs will rise dramatically. In fact, the scenario that leads to the 5.6°C prediction assumes that economic growth will occur extremely rapidly and that coal will supply an increasing proportion of the energy that fuels this growth.

An increase in the proportion of energy derived from coal seems plausible in the short to medium term, as poor populations shift from burning biomass (wood and dung) to more reliable and less polluting forms of energy, such as distributed electricity produced by burning coal. In the longer term (e.g. post-2050), a switch to other energy sources seems very likely.

The implausibility of the assumption that coal use will increase during the second half of the 21st century pales into insignificance compared to the absurdity of the economic claim underlying the scenario. It is barely consistent to argue, on the one hand, that climate change will result from rapid economic growth and, on the other, that climate change will have massively negative economic impacts.

The only way these two assertions could be reconciled is if the growth occurs in some places, while the adverse effects occur elsewhere. But that is not the basis of the IPCC scenarios. Instead, in these bizarre fictions, the world's economies are assumed gradually to converge over the course of the 21st century. Now, economic convergence in itself is not so improbable, even though it implies that by 2100 both Bangladesh and the USA would have similar levels of economic output. The problem is that in order for that to happen, Bangladesh would either have found a highly cost-effective way of coping with any adverse effects of climate change, or it

would not have suffered these adverse effects. Either way, there appears to be a contradiction between the economic scenarios that underpin the IPCC's climate forecasts and the scary stories that the IPCC tells on the back of these forecasts.

The IPCC's median forecast for global-mean warming by 2100 is 2°C. Some argue that even this dramatically overestimates the likely warming. But the good news is that warming of 2°C is likely to be largely benign. Any GHG-induced warming is expected to be greater at high latitudes than at the tropics. A small amount of warming at high latitudes would improve farming conditions by lengthening the growing season and increasing the amount of precipitation. In addition, higher levels of carbon dioxide would enhance rates of growth, further benefiting agriculture.

## Choosing the right policy to address climate change

Notwithstanding the dubiousness of the IPCC's scary scenarios, concerns about climate change do merit serious investigation and policy responses should be evaluated. The problem is that debate over which policy is most appropriate has been replaced with an assumption that there is only one solution, namely limits on emissions of greenhouse gases. In fact, the question remains as to what is the best way to enable humanity to cope with such changes.

Some believe that climate change is an exceptional environmental problem that requires global regulation. By reducing emissions now, it is said, we buy insurance against future catastrophic changes. But against what exactly is Kyoto insuring, and at what price? By itself, Kyoto will have little if any impact on the global climate.

So, would it actually be an effective insurance policy? Some proponents of Kyoto-style restrictions on emissions claim that they will not be costly. If that were true, then such restrictions would clearly be acceptable, even desirable, regardless of the size of benefits they supply. But it is almost certainly not true. Indeed, it is difficult to imagine the circumstances under which such restrictions might be costless.

There are those, for example, who assert that Kyoto will

lead to job creation. It is probably true that some jobs will be created as a result of Kyoto. However, it is also highly likely that the number of jobs lost will exceed the number that are created – so there will be a net loss of jobs. Moreover, it is almost certainly true that the value of the jobs lost will be greater than the value of the jobs gained – so Kyoto will be responsible for reducing average incomes. It will also reduce the average level of skill required for each job, since there will be more people engaged in low-value, low-skill jobs such as mixing cement for the creation of wind turbines, or collecting wood from coppices.

Others see in Kyoto and associated policies, such as carbon trading programmes, opportunities to make money. Again, it is true that some people will probably make money out of Kyoto. However, it is also true that the amount of money gained will almost certainly be smaller than the amount of money lost. And the number of people who benefit will almost certainly be smaller than the number of people who lose.

The fundamental point is that energy is an essential ‘factor of production’; that is to say it is an important ingredient in all economic activity. Society can either obtain its energy from low-cost sources, such as coal, oil, gas, and (to an extent) nuclear and hydro, or it can get its energy from high-cost sources, such as wind turbines, solar cells, and biomass fuels (wood, dung, corn-alcohol, etc.).

If society obtains its energy from low-cost sources, then more resources are available to be spent on other inputs to production (including wages), which means that economic growth occurs at a faster pace and people earn more money while doing more fulfilling jobs. If society obtains its energy from high-cost sources, then there will be correspondingly fewer resources available for wages and growth-enhancing activities.

So, by increasing the cost of all forms of energy, Kyoto and similar policies will reduce the total number of jobs, reduce the average level of skill of workers, and reduce the rate of economic growth. This is hardly a recipe for a more sustainable economy or society.

While such policies would almost certainly reduce the differential in income and wealth between people in rich and people in poor countries, they would do so in the

main by destroying wealth and reducing income of those in rich countries.

The reason for this is twofold. First, energy is a basic factor of production, so increasing the cost of energy by mandating a shift to lower-carbon forms will reduce output. Second, hydrocarbons are used by consumers in all manner of applications, both directly, for example in cars and gas stoves, and indirectly, when they turn on their lights. So, reducing the availability of hydrocarbons will create energy poverty.

Although some middle-income countries might benefit from a shift in the location of industrial production, for the most part people in poor countries would suffer – those in the poorest countries, especially, because they have little industrial capacity. The reason is that reducing income in rich countries will reduce demand for all products, including agriculture, textiles, and apparel, which are the main products currently exported from poor to rich countries.

In most cases, limiting GHG emissions will very likely make any problems resulting from climate change more intractable by slowing down rates of economic growth, reducing average incomes and limiting the adoption of existing technologies and the development of new technologies.

## Against the dismal scientists

Many environmental campaigners believe that the costs of a policy like Kyoto do not matter, because the earth is too sacred to be subjected to the cold, crass theories of economists. Under this view, traditional economic growth itself is unsustainable – indeed, global warming is just one manifestation of mankind’s evil obsession with consumption. When economists and politicians talk about the tradeoffs of ‘climate control’ policies such as Kyoto, it is simply a way to dodge a necessary, nay inevitable reversal of humanity’s evil ways.

The spectre of fireball earth presents a perfect vehicle for declaring the need to make our actions more ‘sustainable’ and to pursue any policy which would achieve the end of extinguishing the fire; preventing Prometheus. By making consumption more costly and thus less desirable, the Kyoto Protocol and other policies

would reduce economic activity sufficiently to please the puritans and, it is hoped, to stem climate change altogether. For these people, humanity plays second fiddle to environmental protection. Their logic implies that the earth's value is infinite and that it must be protected at any cost.

In the real world, individuals must use some metric to decide how to use their scarce time, money and other resources in myriad ways to fit their individual goals and desires. The preferred metric of many such decisions is financial cost. This is no less true with regard to sustainable development. There are many paths to sustainability, but to decide which one to follow we must establish priorities.

## Adaptation through 'aid'?

A parallel strategy to mitigation advocated by NGOs and international agencies is that of 'adaptation' to climate change. 'Adaptation' for these folks has generally tended to mean increased foreign aid transfers from the governments of wealthy countries to the governments of poor countries for projects that would enable poor countries to deal with specific effects of climate change. It is argued, for instance, that direct infrastructure projects in poor countries, such as drainage ditches, should be funded by wealthy countries.

Such foreign aid is partly motivated by feelings of guilt – that wealthy countries have caused the problem of climate change by consuming energy and creating wealth, and that wealth transfers are needed to help poor countries to deal with climate impacts. The foreign aid carrot may also be used to encourage poor countries to assume obligations under the Kyoto Protocol to cut emissions after 2012.

Yet transfers of financial resources from the governments of rich countries to the governments of poor countries have been largely unsuccessful in stimulating adaptation. Consider figures 3 and 4, which show the relationships between cumulative per capita spending on aid and economic growth (3) and changes in life expectancy (4).

From 1975 to 2002, foreign aid made no net contribution to the economic development of recipient

countries. The governments of two countries, Gabon and Nicaragua both received over \$2000 in aid per capita, yet GDP per capita in both fell by more than \$2000 – a remarkable feat! Even a narrow focus on the period 1990–2002 offers no more encouragement, suggesting that the alleged 'reforms' of aid spending have had little impact on its productivity.

Figure 4 is perhaps the most striking. Since 1960, aid has – on average – had no perceptible impact on life expectancy.

Aid has been a failure because a lack of government funds is not the primary problem in poor countries. To illustrate, consider the case of Nigeria – a country which happens to contain one of the largest oil deposits on the planet. Oil wealth in Nigeria has been controlled by government officials – until recently it was in the hands of the murderous kleptocrat General Sanai Abache – who used it to line their pockets and keep the politically important elite happy, rather than to promote development.

There is little point to pouring money into a country whose government has no intention to encourage economic development and the elimination of poverty. Indeed, as Mengistu showed in Ethiopia, Mobutu in Zaire, Pol Pot in Cambodia, and Idi Amin in Uganda, dictators will happily accept 'aid' if it helps to prop up their regime. In such cases, government-to-government transfers are not merely counterproductive, they are murderous.

The more fundamental problem is that 'aid' is based on a largely false premise, namely that poverty itself is a barrier to development. In general this is simply not true. Economic development in Western Europe did not require massive redistribution from the rich to the poor. Rather, it required a change in the structure of Europe's institutions; a move away from the feudal system of the early middle ages to a trading economy.

While sub-Saharan Africa now appears to be facing a genuine crisis, in the form of disease (HIV/AIDS) that is destroying the economically productive sector of society, it is probably unique in the world (if not world history) in requiring external assistance to escape from such a quagmire. And even then, such assistance is unlikely to lead to significant growth; rather, it might merely prevent total economic collapse.

Figure 3 **Impact of aid on economic development 1975–2002<sup>9</sup>**

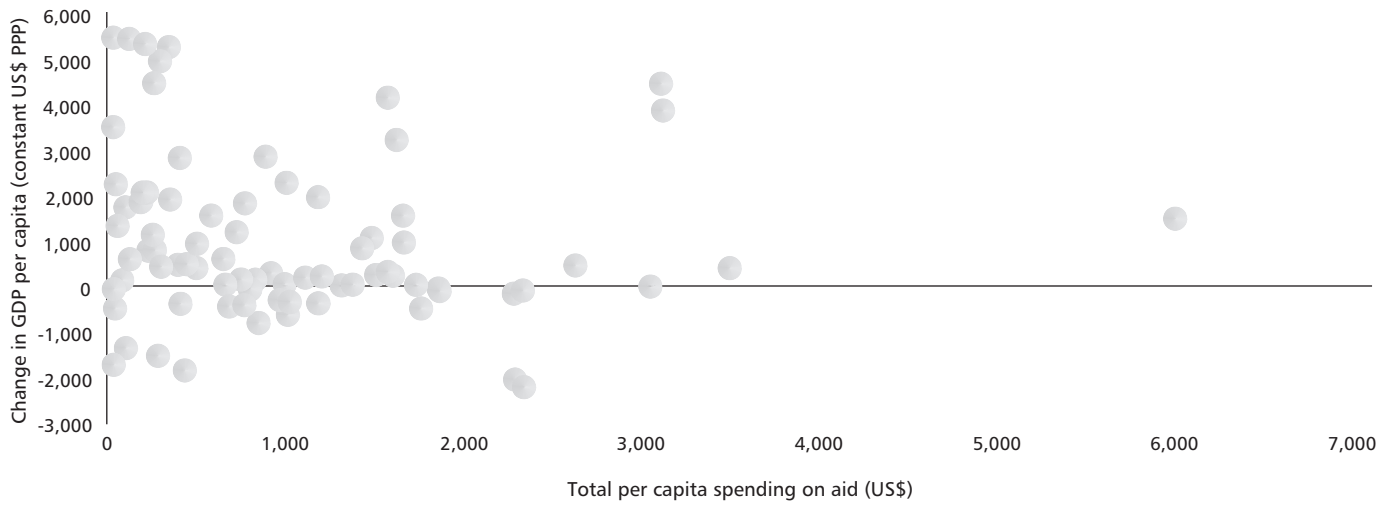
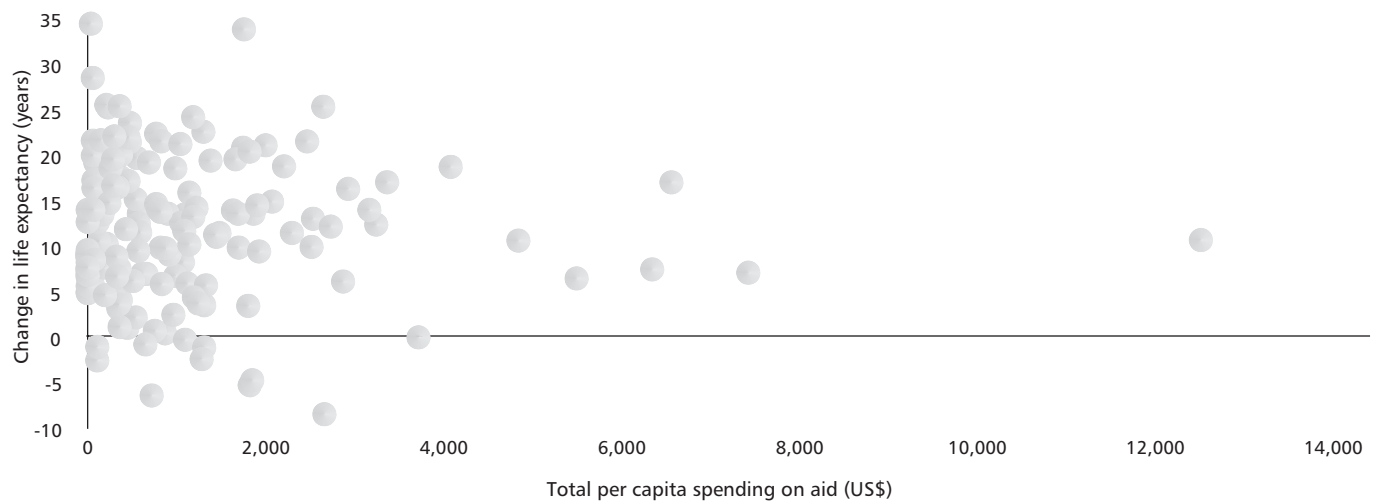


Figure 4 **Impact of aid on life expectancy 1960–2002<sup>10</sup>**



<sup>9</sup> World Bank data

<sup>10</sup> World Bank data

What aid schemes have done is to short-change the poor. While aid is given in their name, bureaucracies have generally not used aid in ways that benefit poor people at large. If countries are to develop sustainably, institutional reforms that eliminate the fundamental causes of poverty are far more likely to deliver benefits to poor people.

## Wealth, health and a clean environment

Empirical evidence from the past two centuries suggests that economic growth, human wellbeing and a clean environment go hand-in-hand. Increased wealth is associated with improvements in nearly every aspect of human well-being and environmental quality.<sup>11</sup> Wealthier people live longer, are better nourished, have lower mortality rates, have better access to clean water, sanitation, and education, and benefit from a cleaner environment.

Environmental quality has improved dramatically over the course of the past century in rich countries, with significant declines in air and water pollution. The air in London is now cleaner than at any time since the sixteenth century.<sup>12</sup>

At the turn of the 20th century, British towns were plagued by smog caused in large part by the burning of coal in relatively simple household fires. Over the course of the following four decades, households gradually – and almost entirely voluntarily – switched to burning ‘town gas’ in increasingly sophisticated heating systems. The result was a dramatic reduction in pollution and associated ill-health. By the time of the Clean Air Act of 1956, which mandated the replacement of coal fires with gas, electricity or coal, the transition was already well under way:

*Prosperity and technology were once responsible for air pollution. Today they are essential for its cleanup. Their transition – from problems to solutions – began toward*

*the latter part of the [nineteenth] century with the emergence of new, clean energy sources and more efficient combustion technologies, and gathered steam through the twentieth century. And through the decades, one by one, the various pollutants were brought under control, each being forced through an environmental transition. As if in accordance with a grand design, the most obvious and the easiest-to-control problems were addressed before others, with each pollutant’s transition being determined by factors dependent ultimately on prosperity and technology.<sup>13</sup>*

Even indoor air pollution – among the most significant causes of early death amongst poor people – is improving as people in poor countries switch from poorly-flued wood and dung fires to more efficient and cleaner fuels such as gas and electricity, or simply better, more efficient stoves. But these changes are only possible with increases in income, which enable the purchase of superior technologies and encourage people to spend money on more efficient goods because their time is no longer efficiently spent gathering wood and dung for fuel.

Access to existing and new technologies allows people to use their resources more efficiently, to be healthier and to live a more benign existence. Such technologies are not an end in themselves: they allow people to work fewer hours and with less effort, to earn a living rather than subsist, to control their environment and to invest in the future of their children, their community and their country, as well as their environment.

Economic development and the associated increases in wealth, enhanced technologies and improved infrastructure have been the primary drivers of the improvement in the lives of people globally. Increased wealth means that can children go to school rather than working on the farm. Improved technologies enable the eradication of water-borne diseases. Improved infrastructure means children can obtain the variety of foods and medicines that will enable them to grow up and live healthy, happy, long lives.

<sup>11</sup> Goklany, I. (1999). *Clearing the Air: The Real Story of the War on Air Pollution*. Washington, DC: Cato Institute. p.155.

<sup>12</sup> Lomborg, B. (2001) *The Skeptical Environmentalist*, p. 165 (figure 86). Cambridge: Cambridge University Press.

<sup>13</sup> Goklany, I. (1998) “The Environmental Transition to Air Quality” *Regulation*, Vol. 21, No. 4

Given the strong relationship between prosperity, health and a clean environment, the best policy for reducing the vulnerability of people to potentially negative aspects of climate change is one that enables people to become rich and thereby avail themselves of all the adaptive measures that the wealthy can afford.

## A framework for adaptation

As potential problems resulting from climate change are multiple, no single solution can be proposed. However, underlying many of the problems is a lack of wealth and technological development, so actions that lead to wealth creation and technological advancement are likely to be beneficial. The question is: what can actually be done to improve the situation?

Current mitigation and adaptation proposals are justified on the basis that future generations may be adversely affected by climate change. To pursue such policies – prioritising for people who do not yet exist over people who are alive today – would be ignorant at best and immoral at worst.

Today, two worlds exist. Children in poor countries still die of diseases that are utterly preventable and which have been eradicated in wealthy countries. Women and children in poor countries spend their days in pursuit of water, energy and food, while their counterparts in wealthy countries enjoy the political, social and economic freedoms afforded by relative prosperity.

Poverty is the single most important factor in determining vulnerability to climate and other whims of nature. The best way simultaneously to achieve adaptation, human wellbeing and sustainable development is for poor countries to adopt a strategy which strikes at the fundamental causes of poverty.

Such a strategy would involve the adoption of institutions that provide stronger incentives for people to invest their time, effort and resources in the pursuit of better solutions.

## Institutions

What is meant by these ‘institutions’? Institutions are the framework within which people act and interact –

they are the rules, customs, norms, and laws that bind us to one another and act as boundaries to our behaviour. Institutions reduce the number of decisions that we need to take; they remove the responsibility to calculate the effect of each of our actions on the rest of humanity and replace it with a responsibility to abide by simple rules. In a system in which rules emerge spontaneously and rules are selected by evolutionary processes, good rules will tend to crowd out bad rules. That is to say, over time, rules that result in better outcomes will be preferred to rules that result in worse outcomes.

If the focus were on the institutions of the free society rather than specific outcomes, political decision-makers would be less able to favour unfairly special interests. These institutions enable adaptation by fostering resilience in the face of uncertainty. The absence of such institutions creates poverty and creates vulnerability to change in general. The key institutions are property rights, contracts, the rule of law, open trade and good governance.

*Property rights:* Property rights are created in order to resolve competing claims over resources. To function effectively as an incentive to both use and conserve resources, property rights must be well-defined, enforceable and transferable. In this way, property rights are capital; they give people incentives to invest in their land and they give people an asset against which to borrow, so that they might become entrepreneurs. The innovation of new technologies occurs when people are allowed to benefit from the investments they make through ownership of property.

However, poor countries generally lack well defined, readily enforceable property rights. People in poor countries are oppressed by tenure rules which make it difficult for them to rent, buy or sell property formally. Land transactions typically involve paying large bribes to local officials, who have a vested interest in maintaining the status quo.

*Contracts:* Another fundamental institution for sustainable development is freedom of contract. This includes both the freedom *to* contract – the freedom to make whatever agreements one desires, subject to fair and simple procedural rules – and the freedom *from*

contract – the freedom not to be bound by the decisions of others. Freedom of contract is a fundamental part of the freedom to associate with others. It includes the freedom to transact – to buy and sell property – and as such it is an essential adjunct to the right to clearly defined and readily enforceable property rights.

Contracts and property rights underpin the functioning of markets. The freedom from contract prevents others from attempting to interfere with one's right to engage in exchange. The freedom to contract also enables people to bind themselves to agreements and thereby creates greater legal certainty. This in turn encourages people to engage in trade and investment. Armed with enforceable property rights and contracts, the peasant becomes a merchant.

*Rule of law:* The rule of law, brokered by an independent and fair judicial system, is necessary to ensure that property rights, contracts and the freedoms associated with a democratic and free society are upheld, respected and enforced for all members of that society. When the rule of law is absent – that is, when the power of discretion is vested in politicians, bureaucrats and civil servants – this is a certain formula for bribery and corruption. In this situation, economic and entrepreneurial activity becomes dependent exclusively on political manoeuvring rather than on based on its benefits to consumers and society.

*Open trade:* Open markets and free investment encourage competition. By removing barriers to trade, all people can engage in mutually beneficial exchanges. This enhances competition, creates incentives for innovation and leads to more rapid advances in human welfare and environmental protection. Removing market-distorting taxes and subsidies, especially to agriculture and other products where people in poorer countries have a comparative advantage, encourages economic development and benefits consumers.

*Good governance:* While there is no magic formula for good governance, it is enabled by transparency and accountability amongst elected officials, bureaucrats and civil servants, and the elimination of practices which are a source of corruption. Good governance would be achieved with more universal application of the rule of

law, and an understanding amongst people that the rule of law is higher than the discretionary power often employed by governments.

## The benefits of institutions

### **Institutions encourage decentralised responsibility and decision-making**

The effect of the institutions outlined above is to devolve both incentives and responsibility for decision-making to the lowest possible level, be that individuals, businesses, communities. Most poor people today have suffered at the hand of bureaucrats and the elite, who often invoke laws to protect their own economic interests, thus stifling economic development and wealth creation. These institutions would enable people to benefit from taking risks and from investing in the future, and would likewise give them the ability to manage their own destinies rather than relying on the whims of political regimes.

### **Institutions foster an environment of certainty**

Property rights and contracts require a system based on the rule of law. The rule of law ensures that property rights and contracts can be defined, enforced, and transferred, which affords an environment of certainty in which to make decisions.

When effective and transparent legal systems are in place, markets – the cornerstone of economic activity – function better. Greater transparency in government and the elimination of practices which are a source of corruption also foster an environment of certainty.

### **Institutions encourage flexibility and learning from mistakes**

Human errors are inevitable – but a system whereby actors in the market are individually responsible for the risks that come from their decisions is the system most likely to encourage learning from our past mistakes. Such a system also helps to ensure that, by and large, people are not harmed, or they are compensated if harmed.

## **Institutions enable a wide sharing of benefits**

Open trade, freedom of movement and regulations based on rational risk assessments and sound science enable all people – not just the elite – to benefit from modern technology, investment and economic growth.

## **‘Power to the people’?**

NGOs and democratically deficient international organisations (agencies of the UN and the like) often claim that global problems require global regulations. One of their motivations for making such claims is that such regulations would enable them to make decisions for the world. In other words, unaccountable, unelected bureaucrats and their friends in the NGO community would be responsible for determining the conditions under which economic activities take place.

By contrast, the institutions of the free society, while imperfect, nevertheless are far more democratic than a global regulatory agency could ever hope to be.

## **Institutions enable humanity to share knowledge and disperse the effects of future risk and uncertainty**

Sophisticated financial markets, including futures markets and insurance, in conjunction with other elements of modern wealthy economies, help human beings to cope more effectively with risk and uncertainty. By contrast, such markets are largely absent in poor countries because they lack institutions that underpin them, which is yet another reason that the poor are more vulnerable to risk and uncertainty.

Over time, as economic conditions are improved by institutional reforms, poor countries would experience the kinds of improvements in living conditions that wealthier countries have experienced, increasing their resilience and decreasing their vulnerability to unforeseen circumstances.

The adoption of the institutions of the free society by poor countries would lead to:

- Improvements in water and wastewater management, thereby enhancing access to safe

drinking water, reducing deaths from diarrhoea and related diseases, as well as decreasing the incidence of diseases transmitted by insects like mosquitoes that breed in stagnant water.

- Improvements in education and access to information, enhancing sanitation and reducing diseases associated with improper sanitation, as well as other diseases.
- Improvements in access to affordable, reliable and cleaner forms of energy and other life-improving technologies, such as refrigeration, air conditioning, more efficient building structures.
- More political, social and economic freedoms for all members of a given society.
- Enhanced environmental protection and better use of natural resources.

Adoption of institutions would likewise encourage

- Research and development of new energy, construction, transportation, food production, heating and cooling technologies.
- Investment in infrastructure projects which are genuinely –rather than politically – useful.
- Faster transitions when changes, catastrophes and crises occur.
- Economic diversification and higher incomes – as people’s labour becomes more valuable, fewer people are engaged in lower-value economic activities such as agriculture.

## **How can sustainable development be achieved?**

Sustainable development is a phrase often employed carelessly to imply that poverty, environmental degradation, disease, and other problems afflicting the world are predominantly caused by, and therefore are the responsibility of, wealthy countries.

According to this view – one widely held by organisations claiming to represent the interests of the environment, consumers, the poor, and the sick – people

in the rich world consume too great a proportion of the world's resources and emit too great a proportion of the world's pollution; they exploit people in the poor world by paying too little for coffee and bananas and by making them pay too much for pharmaceuticals.

The solution typically offered by those who follow this interpretation of 'sustainable development' is to impose swinging restrictions on the use of resources, wide-ranging interventions in the governance and behaviour of multinational companies, and restrictions on international trade. These interventions would be enacted and enforced through various international agencies.

An alternative view – and one that is more consonant with the thinking represented in this report – holds that the world is generally improving and that the rich world in particular has adopted, for the most part, institutions and policies that are sustainable. Broadly speaking, that means the institutions outlined above – property rights, contracts, the rule of law and effective legal systems, open trade and good governance.

According to this view, most of the problems of the poor world result not from the actions of those in wealthy countries but from the adoption of unsustainable policies by governments in poor countries. Sadly, as the plight of most poor countries suggests, few countries have come close to instituting such systems of good governance and decentralised decision-making.

In particular, attempts to plan economies have proved disastrous in the Soviet Union and elsewhere. Lack of adequately defined and readily enforceable property rights – often the result of well-meaning but utterly misguided government intervention – holds back economic development in many countries, while red tape stifles entrepreneurial activity and perpetuates poverty.

As a general rule, institutions that are compatible with human nature are more likely to result in appropriate levels of environmental protection and conservation of natural resources. One institution in particular – private property – has been shown to have such characteristics. When combined with the rule of law, which enables people to enforce and transfer what they own, private

property encourages individuals to care for their property.

While such institutions do not guarantee human happiness, they can be considered a critical step towards humanity's well-being. Uncertainty about the future has defined human existence. That is one of the reasons the institutions of the free society have evolved: they help humanity more effectively cope with change.

## Conclusions

Climatic change may turn out to be benign or harmful – we do not know. But in the context of this uncertainty, policies that are narrowly focused on adaptation to possible negative effects are short-sighted and may even be counterproductive. Policies aimed at mitigation through control of atmospheric carbon are almost certainly counterproductive.

The political commentator, HL Mencken, once said that 'for every problem there is a solution that is simple, direct and wrong'. In the case of climate change the simple, direct and wrong solution is to impose restrictions on emissions of greenhouse gases.

A more constructive perspective suggests that poverty exacerbates all sorts of problems, whether or not they are caused by changes in the earth's climate. Under this view, only by eliminating poverty can we solve the myriad problems that prevent humans from achieving sustainable development.

Development is not just about fulfilling poor people's basic needs, but allowing them to choose how they develop and to choose which technologies they use. We have a moral responsibility towards fellow human beings who are alive today to ensure that this happens.

## About the Sustainable Development Network

The Sustainable Development Network ([www.sdnetwork.net](http://www.sdnetwork.net)) is a coalition of non-governmental organisations and individuals who believe that sustainable development is about promoting progress and eliminating poverty by empowering people through decentralised ownership and property rights, the rule of law, and free trade. These policies empower people and communities to take charge of their own lives.

Members of the Sustainable Development Network believe that the best way to create sustainable development is to focus on the institutional framework in which people act. Policies that are based on institutions are more likely to encourage individuals to make the best use of their resources and to protect the environment.

### **SDN Advisors**

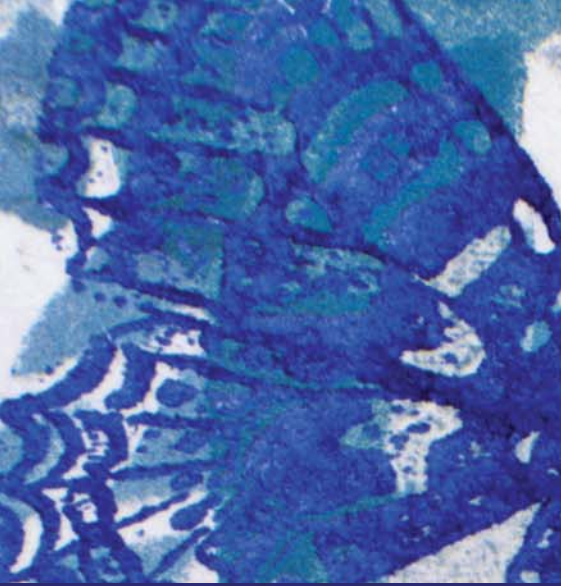
Professor Douglas Southgate  
Professor Sir Alan Peacock  
Professor Robert H. Nelson  
Professor Deepak Lal  
Dr. Parth Shah  
James Shikwati

## About International Policy Network

International Policy Network (IPN) is a charity based in the UK, and a non-profit (501c3) organization in the US. It is a non-governmental, educational and non-partisan organization which relies on charitable donations from individuals, foundations and businesses to carry out its work. It accepts no money from government.

IPN's mission is to empower individuals and promote respect for people and property in order to eliminate poverty, improve human health and protect the environment. IPN promotes public awareness of the importance of this vision for all people.

IPN seeks to achieve its mission by promoting the role of market institutions in certain key international policy debates: sustainable development, health, and globalisation and trade. IPN works with academics, think tanks, journalists and policymakers on every continent.



# Climate change and sustainable development

A BLUEPRINT FROM THE SUSTAINABLE DEVELOPMENT NETWORK



Human welfare is inextricably linked to the earth's climate. Similar to other life forms, the manner in which we respond to change is critical not only to survival, but to our well-being. The prospect of climatic change offers an opportunity to re-evaluate how we prioritise our approaches to global problems.

The international community promotes 'mitigation' and 'adaptation' as parallel strategies to cope with adverse impacts of climate change. Many of these impacts are already occurring, and are exacerbated by global poverty – and they will not magically disappear if countries adopt mitigation schemes such as the Kyoto Protocol. Meanwhile, discussions of 'adaptation' revolve around foreign aid schemes, which in the past have generally been counterproductive and failed to improve the lives of people in poor countries.

Poor people must not be short-changed again and again by governments and international agencies. Whether climate change proves benign, problematic or even catastrophic, the Sustainable Development Network believes that adaptation must take place in the context of poverty elimination and truly sustainable development.

This blueprint outlines such an adaptation strategy based on institutions such as property rights, open trade, the rule of law, freedom of contract and good governance in general.